

Seattle Public Schools Science Standards

Balancing and Weighing

(Science and Technology for Children)

Grade 2

PHYSICAL
SCIENCE

EARL #1 The student understands and uses scientific concepts and principles.		
Component	Benchmarks	Lesson #s
1.1 – Use properties to identify, describe, and categorize substances, materials, and objects.	<p><i>Properties of substances</i></p> <ul style="list-style-type: none"> identify, describe, and sort physical attributes of materials and objects (e.g., color, shape, size) 	1 - 16
1.2 – Recognize the components, structure, and organization of systems and the interconnections within and among them.	<p><i>System</i></p> <ul style="list-style-type: none"> identify the parts of a system, how the parts go together, and how they depend on each other (e.g., equal arm balance) 	1 – 11, 13 – 16
1.3 – Understand how interactions within and among systems cause changes in matter and energy.	<p><i>Nature of forces</i></p> <ul style="list-style-type: none"> recognize that a force acts in a particular direction (e.g., equal arm balances) 	3 – 11, 13 - 16

SCIENCE
SKILLS/
PROCESSES

EARL #2 The student understands the skills and processes of science and technology.		
2.1 – Develop the abilities necessary to do scientific inquiry.	<p><i>Questioning</i></p> <ul style="list-style-type: none"> ask questions about objects, organisms, and events in the environment 	1 – 3, 6, 8, 16
	<p><i>Designing and conducting investigations</i></p> <ul style="list-style-type: none"> plan and conduct simple investigations, using appropriate tools, measures, and safety rules 	8, 15, 16
	<p><i>Evidence and explanation</i></p> <ul style="list-style-type: none"> use data to construct reasonable explanations 	3, 4, 7 – 10, 14 – 16
	<p><i>Communication</i></p> <ul style="list-style-type: none"> record and report observations, explanations, and conclusions using oral, written, and mathematical expression 	1 – 16
2.2 – Apply science knowledge/skills to solve problems, meet challenges.	<p><i>Identifying problems</i></p> <ul style="list-style-type: none"> identify problems in which science and technology can be used to find solutions 	3 – 5, 8 – 11, 14 – 16
	<p><i>Designing and testing solutions</i></p> <ul style="list-style-type: none"> propose, design, and test a solution to a problem 	8, 15, 16
	<p><i>Evaluating potential solutions</i></p> <ul style="list-style-type: none"> evaluate how well a design or a product solves a problem 	2, 5

SCIENTIFIC
THINKING

EARL #3 The student understands the nature and contexts of science and technology.		
<p>3.1 – Understand the nature of scientific inquiry</p>	<p><i>Intellectual honesty</i></p> <ul style="list-style-type: none"> understand that all scientific observations should be reported accurately even when they contradict expectations <p><i>Limitations of science and technology</i></p> <ul style="list-style-type: none"> begin to distinguish between questions that can be answered with science and technology and those that cannot <p><i>Dealing with inconsistencies</i></p> <ul style="list-style-type: none"> begin to explain why similar investigations may not produce similar results <p><i>Evaluating methods of investigation</i></p> <ul style="list-style-type: none"> begin to recognize that results of scientific investigations can come from expected and unexpected sources (e.g., through sharing the results of investigations) 	<p>3, 4, 7 – 10, 13 – 16</p> <p>1, 3, 6</p> <p>3 – 11, 13 – 16</p> <p>3 – 11, 13 – 16</p>
<p>3.2 – Know that science and technology are human endeavors, interrelated to each other, to society and to the workplace.</p>	<p><i>All peoples contribute to science and technology</i></p> <ul style="list-style-type: none"> understand how science and technology are used or have been used by people <p><i>Relationship of science and technology</i></p> <ul style="list-style-type: none"> recognize that people have invented tools for everyday life and for scientific investigations <p><i>Careers and occupations using science, mathematics, and technology</i></p> <ul style="list-style-type: none"> identify the knowledge and skills of science, mathematics, and technology used in common occupations 	<p>4, 5, 11</p> <p>3 – 16</p> <p>3, 4, 11</p>